UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/526,707	03/03/2005	Oliver Amberny	28944/41036	7433

4743 7590 07/03/2008

MARSHALL, GERSTEIN & BORUN LLP
233 S. WACKER DRIVE, SUITE 6300
SEARS TOWER
CHICAGO, IL 60606

EXAMINER	
HOLLIDAY, JAIME MICHELE	
ART UNIT	**PAPER NUMBER**
2617	
MAIL DATE	**DELIVERY MODE**
07/03/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/526,707	AMBERNY ET AL.	
	Examiner	Art Unit	
	JAIME M. HOLLIDAY	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 April 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 30, 2008 has been entered.

Response to Amendment

Response to Arguments

2. Applicant's arguments with respect to **claims 1-17** have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 17 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Claim 17 recites the limitation "the interface circuit" in line 18. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. **Claims 1, 2, 7-9, 13 and 15** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Shaver et al. (US 6,947,736 B2)** in view of **Lesguillier et al. (U.S. Patent # 6,727,804 B1)**.

Consider **claim 1**, Shaver et al. clearly show and disclose a central base for a private wireless local area network (home networking method and system is based on the IEEE 802.11 wireless networking standard expanded to encompass home phone line media communication and/or home power line

media communication operation seamlessly [abstract]), the central base comprising an electronic central unit that is supplied with electricity by at least one live supply line intended to be connected to an external electricity power source, said electronic central unit adapted to communicate with a public telecommunication network via a plain old telephone service (POTS) connection, and with at least one wireless peripheral device, according to a digital bidirectional wireless protocol for a private wireless local area network (access point **250** includes three AFEs (analog front end) each adapted to communicate with a different one of the medium types; an AFE specific for each of wireless, phone line, and power line can be included the access point; one AFE can be included for wireless operating at either 2.4 GHz or 5.0 GHz, one for phone line operating in a 20 MHz band above 2 MHz over standard home phone wiring, and one for power line operating in a 20 MHz band above 2 MHz [fig. 2, col. 3 lines 45-65]); an interface circuit which is controlled by the electronic central unit of said central base and which is connected to said supply line, wherein the electronic central unit is adapted to communicate messages between either one of the public communication network or the at least one wireless peripheral device and the power supply line (the access point includes three AFEs each adapted to communicate with a different one of the medium types discussed; the terminal devices include power line stations **212**, phone line stations **222** and wireless stations **232** in which station-to-station transmission between wireless

and wired terminals are enabled via the intelligent access point [fig. 2, col. 3 lines 17-21, 62-64]).

However, Shaver et al. fail to specifically disclose that the power line uses a low-pass filter.

In the same field of endeavor, Lesguillier et al. clearly show and disclose an interface circuit adapted to send and receive messages on said supply line, and further adapted to send and receive high frequency periodic signals representative of sent and received messages (power line communication system includes a transmitter and a receiver, both providing a communication path between two communication control devices over a power line [abstract]; the receiver has a carrier sense function, and with this carrier sense function, when in the receiving mode, a reference signal mixes with the incoming communication signal; if the received signal on the power line is lower than the reference signal, the communication control device performs correct demodulation of the reference signal, and the received signal is seen as noise; however, if the received signal on the power line is higher than the reference signal, demodulation errors occur at the communication control device, thereby indicating that the received signal is an actual message, [col. 2 lines 1-12]); and a low-pass filter adapted to filtering said high frequency periodic signals received from the supply line between the interface circuit of the central base and at least a portion of the electronic circuits of the central base (when the transmitter (1) is active, a communication signal (2) generated by the communication control

device enters the transmitter (1) through its signal input. The communication signal (2) is referred to as the "PL_TX" input signal (2) hereafter. The communication signal (2) is preferably first sent through a low-pass band filter (3) to eliminate high frequencies, [col. 3 lines 20-30]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made use a low-pass filter to block high frequencies as taught by Lesguillier et al. in the method of Shaver et al., in order to implement a home network using multiple protocols.

Consider **claim 2**, Shaver et al., as modified by Lesguillier et al., clearly show and disclose the claimed invention **as applied to claim 1 above**, and in addition, Shaver et al. further disclose in which the interface circuit of the central base is installed in drop and insert mode on said supply line (the AFEs are interchangeably connectable to each type of station and the access point [col. 3 lines 55-57]).

Consider **claim 7**, Shaver et al., as modified by Lesguillier et al., clearly show and disclose the claimed invention **as applied to claim 1 above**, and in addition, Shaver et al. further disclose that wireless device comprising a central base and an external interface module, distinct from the central base, which itself comprises: an electronic central unit, and an interface circuit controlled by said electronic central unit of the external interface module and which is connected to said supply line, this interface circuit of the external interface module being suitable for communicating with the interface circuit of the central base by

sending and receiving messages on said supply line (the access point includes three AFEs each adapted to communicate with a different one of the medium types discussed; a power line station **212** only includes an AFE adapted to communicate with the power line medium; the same (or substantially the same) digital transceiver section **310** and higher layer protocols can be used in each station **212**, **222** and **232**, and in access point; with an access point adapted to communicate with all three medium types, each type of terminal device (station) can communicate station-to-station with different types of terminal devices via the access point [col. 3 line 62- col. 4 line 10]).

Consider **claim 8**, Shaver et al., as modified by Lesguillier et al., clearly show and disclose the claimed invention **as applied to claim 7 above**, and in addition, Shaver et al. further disclose in which the interface circuit of the external interface module is installed in drop and insert mode on said supply line (the AFEs are interchangeably connectable to each type of station and the access point [col. 3 lines 55-57]).

Consider **claim 9**, Shaver et al., as modified by Lesguillier et al., clearly show and disclose the claimed invention **as applied to claim 7 above**, and in addition, Shaver et al. further disclose interface circuit of the external interface module, and an electricity supply device intended to connect said supply line to the external electricity power source (the access point includes three AFEs each adapted to communicate with a different one of the medium types discussed; the terminal devices include power line stations **212**, phone line stations **222** and

wireless stations **232** in which station-to-station transmission between wireless and wired terminals are enabled via the intelligent access point; a power line station **212** only includes an AFE adapted to communicate with the power line medium [fig. 2, col. 3 lines 17-21, 62-64, col. 4 lines 1-2]).

However, Griffin et al. fail to specifically disclose using a low-pass filter.

Lesguillier et al. further disclose the receiver has a carrier sense function, and with this carrier sense function, when in the receiving mode, a reference signal mixes with the incoming communication signal. If the received signal on the power line is lower than the reference signal, the communication control device performs correct demodulation of the reference signal, and the received signal is seen as noise. However, if the received signal on the power line is higher than the reference signal, demodulation errors occur at the communication control device, thereby indicating that the received signal is an actual message. When the transmitter (1) is active, a communication signal (2) generated by the communication control device enters the transmitter (1) through its signal input. The communication signal (2) is referred to as the "PL_TX" input signal (2) hereafter. The communication signal (2) is preferably first sent through a low-pass band filter (3) to eliminate high frequencies, reading on the claimed “interface circuit of the external interface module is suitable for sending and receiving high frequency periodic signals representative of messages sent and received, and an electricity supply device intended to connect said supply line to

the external electricity power source; low-pass filter suitable for filtering said high frequency periodic signals," (col. 2 lines 1-12, col. 3 lines 20-30).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made use a low-pass filter to block high frequencies as taught by Lesguillier et al. in the communication method of Shaver et al., in order to implement a home network using multiple protocols.

Consider **claim 13**, Shaver et al., as modified by Lesguillier et al., clearly show and disclose the claimed invention **as applied to claim 7 above**, and in addition, Shaver et al. further disclose external electronic device distinct from the external interface module and communicating with the electronic central unit of said external interface module (power line station can also include a repeater section **255** adapted to communicate directly with a wireless station **232** within the HomeAll **200** [col. 4 lines 12-15]).

Consider **claim 15**, Shaver et al., as modified by Lesguillier et al., clearly show and disclose the claimed invention **as applied to claim 7 above**, and in addition, Shaver et al. further disclose a central base, and in which the electronic central unit of the external interface module is suitable for causing messages intended to be sent by the central base in the form of outgoing service messages to be generated on the supply line, by the interface circuit of said external interface module (power line station can also include a repeater section adapted to communicate directly with a wireless station within the HomeAll; the repeater section only provides for access between one type of wired medium and the

wireless medium, where the access point coordinates accesses to all wired and wireless medium; the repeater section then serves to extend the network reach to wireless station which can not access the access point directly; a power line station adapted with a repeater section can communicate directly with wireless stations as well as with other power line stations, and station-to-station with phone line stations via the access point [col. 4 lines 30-45]).

9. **Claims 3 and 10** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Shaver et al. (US 6,947,736 B2)** in view of **Lesguillier et al. (U.S. Patent # 6,727,804 B1)**, and in further view of **De Ruijter et al. (Pub # U.S. 2005/0036568 A1)**.

Consider **claims 3 and 10**, and **as applied to claims 1 and 7 above**, respectively, Shaver et al., as modified by Lesguillier et al., clearly show and disclose the claimed invention except that the system may receive periodic signals between 100 and 500 kHz.

In the same field of endeavor, De Ruijter et al. clearly show and disclose an interface circuit of the central base (external interface module) is suitable for sending and receiving periodic signals at a frequency lying between 100 and 500 kHz 9a data slicer circuit for extracting data from a received analogue signal, the received analogue signal having a preamble of a predetermined preamble frequency and a data portion with the data, the data portion having a predetermined data frequency, wherein the circuit comprises a low pass filter for obtaining a signal representing a DC value (Vdc) of the received signal. During

reception of the data 3db cut-off frequency of the low-pass filter is set to 100 Hz, [paragraphs 5, 8]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made use a low-pass filter set to 100Hz as taught by De Ruijter et al. in the communication method of Shaver et al., as modified by Lesguillier et al., in order to implement a home network using multiple protocols.

10. **Claims 4 and 11** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Shaver et al. (US 6,947,736 B2)** in view of **Lesguillier et al. (U.S. Patent # 6,727,804 B1)**, and in further view of **Johnston et al. (U.S. Patent # 5,787,360)**.

Consider **claims 4 and 11**, and **as applied to claims 1 and 7 above**, respectively, Shaver et al., as modified by Lesguillier et al., clearly show and disclose the claimed invention except that the interface circuit is controlled by a serial interface controller.

In the same field of endeavor, Johnston et al. clearly show and disclose an interface circuit of the central base is controlled by the electronic central unit of the central base via a serial interface controller (in a mobile communications system each radio unit is associated with a 'home' station, and each base station has a LAN interface for connection to a local area network. The base station **12** includes a microprocessor, radio interface, telephone interface, a LAN interface,

and a serial interface that contains a UART, [abstract, col. 10 line 22- col. 11 line 11]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include a UART within the base station as taught by Johnston et al. in the communication method of Shaver et al., as modified by Lesguillier et al., in order to convert between data received over the associated link and data signals propagating in bit-serial form (Johnston et al.; col. 11 lines 5-9).

11. **Claims 5, 6 and 16** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Shaver et al. (US 6,947,736 B2)** in view of **Lesguillier et al. (U.S. Patent # 6,727,804 B1)**, and in further view of **Folger et al. (U.S. Patent # 5,337,044)**.

Consider **claim 5**, Shaver et al., as modified by Lesguillier et al., clearly show and disclose the claimed invention **as applied to claim 1 above**, and in addition, Shaver et al. further disclose that central base suitable for sending outgoing messages at least to the public telecommunication network and for receiving incoming messages at least from said public telecommunication network, the electronic central unit of the central base being suitable for: (a) recognizing at least certain incoming messages intended for an external interface module, called service messages, and for causing to be generated on the supply line, by said interface circuit of the central base, a message corresponding to each incoming service message, (b) and when it receives a message received by

the interface circuit of the central base on the supply line, determining whether this message must be transmitted to the outside and, in this case, sending an outgoing message, called outgoing service message, corresponding to the message received (the MAC **312** is the data link sublayer that is responsible for transferring data to and from the physical layer **314** and provides the protocol and control to enable access to each of the home mediums; an AFE includes the transmitter, receiver and other typical hardware/software providing the interface between a specific medium and the physical layer for encoding/decoding and modulating/demodulating; the access point coordinates and interconnects access between any user stations connected to the same or different media within HomeAll; such a communication link, or bridge, is enabled by the built-in address fields in the 802.11 MAC frames, and is transparent to layers above the MAC; the 802.11 MAC data frames have up to four address fields, each specifying a source address (SA), a transmitter address (TA), a receiver address (RA), and a destination address (DA); the access point can forward a data frame received from a communication link (such as on a wireless medium) to another communication link (such as on a wireline medium) based on the SA and DA values in the received frame, thereby bridging the two subnetworks comprising these two links [col. 3 lines 35-40; 49-53, col. 4 lines 30-44]).

However, Shaver et al., as modified by Lesguillier et al., fail to specifically disclose that information (messages) sent and received are alphanumeric messages.

In the same field of endeavor, Folger et al. clearly show and disclose alphanumeric message (a system for remote control of a mobile computer system from a base computer system, where the base system generates control command tokens, which are broadcast over a pager system. The base station might be a desktop computer, perhaps connected to a local area network. A command may be issued by the computer such as someone typing an alphanumeric message using a telephone keypad [abstract, col. 3 lines 61-67, col. 6 lines 5-11]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made send alphanumeric messages as commands from a computer or telephone as taught by Folger et al. in the communication method of Shaver et al., as modified by Lesguillier et al., in order to implement a home network using multiple protocols.

Consider **claim 6**, the combination of Shaver et al. and Lesguillier et al., as modified by Folger et al., clearly show and disclose the claimed invention **as applied to claim 5 above**, and in addition, Shaver et al. further disclose sending outgoing messages to at least one wireless peripheral device by using said wireless protocol, and for receiving incoming messages from said wireless peripheral device (terminal devices include power line stations, phone line stations and wireless stations in which station-to-station transmission between wireless and wired terminals are enabled via an intelligent access point [col. 3 lines 17-21]).

However, Shaver et al., as modified by Lesguillier et al., fail to specifically disclose that information (messages) sent and received are alphanumeric messages.

Folger et al. further disclose alphanumeric message (command may be issued by the computer such as someone typing an alphanumeric message using a telephone keypad [abstract, col. 3 lines 61-67, col. 6 lines 5-11]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made send alphanumeric messages as commands from a computer or telephone as taught by Folger et al. in the communication method of Shaver et al., as modified by Lesguillier et al., in order to implement a home network using multiple protocols.

Consider **claim 16**, Shaver et al. clearly show and disclose a central base for a private wireless local area network (home networking method and system is based on the IEEE 802.11 wireless networking standard expanded to encompass home phone line media communication and/or home power line media communication operation seamlessly [abstract]), the central base comprising an electronic central unit that is supplied with electricity by at least one live supply line intended to be connected to an external electricity power source, said electronic central unit adapted to communicate with a public telecommunication network via a plain old telephone service (POTS) connection, and with at least one wireless peripheral device, according to a digital bidirectional wireless protocol for a private wireless local area network (access

point **250** includes three AFEs (analog front end) each adapted to communicate with a different one of the medium types; an AFE specific for each of wireless, phone line, and power line can be included the access point; one AFE can be included for wireless operating at either 2.4 GHz or 5.0 GHz, one for phone line operating in a 20 MHz band above 2 MHz over standard home phone wiring, and one for power line operating in a 20 MHz band above 2 MHz [fig. 2, col. 3 lines 45-65]); an interface circuit connected to the electronic central unit and the supply line, wherein the electronic central unit is adapted to communicate messages between either one of the public communication network or the at least one wireless peripheral device and the power supply line (the access point includes three AFEs each adapted to communicate with a different one of the medium types discussed; the terminal devices include power line stations **212**, phone line stations **222** and wireless stations **232** in which station-to-station transmission between wireless and wired terminals are enabled via the intelligent access point [fig. 2, col. 3 lines 17-21, 62-64]), wherein the electronic central unit is further adapted to receive an incoming message at least from the public telecommunication network, and determine whether the incoming message is intended for an external device and generate a message corresponding to the incoming message on the supply line using the interface circuit of the central base((the MAC **312** is the data link sublayer that is responsible for transferring data to and from the physical layer **314** and provides the protocol and control to enable access to each of the home mediums; an AFE includes the transmitter,

receiver and other typical hardware/software providing the interface between a specific medium and the physical layer for encoding/decoding and modulating/demodulating; the access point coordinates and interconnects access between any user stations connected to the same or different media within HomeAll; such a communication link, or bridge, is enabled by the built-in address fields in the 802.11 MAC frames, and is transparent to layers above the MAC; the 802.11 MAC data frames have up to four address fields, each specifying a source address (SA), a transmitter address (TA), a receiver address (RA), and a destination address (DA); the access point can forward a data frame received from a communication link (such as on a wireless medium) to another communication link (such as on a wireline medium) based on the SA and DA values in the received frame, thereby bridging the two subnetworks comprising these two links [col. 3 lines 35-40; 49-53, col. 4 lines 30-44]).

However, Shaver et al. fail to specifically disclose that the power line uses a low-pass filter.

In the same field of endeavor, Lesguillier et al. clearly show and disclose an interface circuit adapted to send and receive high frequency periodic signals representative of sent and received messages (power line communication system includes a transmitter and a receiver, both providing a communication path between two communication control devices over a power line [abstract]; the receiver has a carrier sense function, and with this carrier sense function, when in the receiving mode, a reference signal mixes with the incoming

communication signal; if the received signal on the power line is lower than the reference signal, the communication control device performs correct demodulation of the reference signal, and the received signal is seen as noise; however, if the received signal on the power line is higher than the reference signal, demodulation errors occur at the communication control device, thereby indicating that the received signal is an actual message, [col. 2 lines 1-12]); and a low-pass filter adapted to filter said high frequency periodic signals between the interface circuit of the central base and at least a portion of the electronic circuits of the central base (when the transmitter (1) is active, a communication signal (2) generated by the communication control device enters the transmitter (1) through its signal input. The communication signal (2) is referred to as the "PL_TX" input signal (2) hereafter. The communication signal (2) is preferably first sent through a low-pass band filter (3) to eliminate high frequencies, [col. 3 lines 20-30]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made use a low-pass filter to block high frequencies as taught by Lesguillier et al. in the method of Shaver et al., in order to implement a home network using multiple protocols.

However, Shaver et al., as modified by Lesguillier et al., fail to specifically disclose that information (messages) sent and received are alphanumeric messages.

In the same field of endeavor, Folger et al. clearly show and disclose alphanumeric message (a system for remote control of a mobile computer

system from a base computer system, where the base system generates control command tokens, which are broadcast over a pager system. The base station might be a desktop computer, perhaps connected to a local area network. A command may be issued by the computer such as someone typing an alphanumeric message using a telephone keypad [abstract, col. 3 lines 61-67, col. 6 lines 5-11]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made send alphanumeric messages as commands from a computer or telephone as taught by Folger et al. in the communication method of Shaver et al., as modified by Lesguillier et al., in order to implement a home network using multiple protocols.

12. **Claim 12** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Shaver et al. (US 6,947,736 B2)** in view of **Lesguillier et al. (U.S. Patent # 6,727,804 B1)**, and in further view of **Watler et al. (U.S. Patent # 6,836,655 B1)**.

Consider **claim 12**, and **as applied to claim 7 above**, Shaver et al., as modified by Lesguillier et al., clearly show and disclose the claimed invention except that the modules communicate using a half-duplex asynchronous protocol.

In the same field of endeavor, Watler et al. clearly show and disclose a central base and the external interface module are suitable for communicating together according to a half-duplex asynchronous protocol (an interlink receiver

system and receiver unit for remote encoding of wireless phone units. The interlink receiver is plugged into the phone unit by removing the battery pack and seating a SIM card in the handset with the electrical contacts of the SIM card in contact with the terminal contacts of the phone unit. The phone unit complies with a communication protocol in ISO 7816 to exchange data and code commands with the SIM card, [abstract, col. 9 lines 22-39]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to communicate using ISO7816 standards (half-duplex asynchronous protocol) as taught by Watler et al. in the communication method of Shaver et al., as modified by Lesguillier et al., in order to implement a home network using multiple protocols.

13. **Claim 14** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Shaver et al. (US 6,947,736 B2)** in view of **Lesguillier et al. (U.S. Patent # 6,727,804 B1)**, and in further view of **Griffin et al. (Pub # U.S. 2004/0063456 A1)**.

Consider **claim 14**, and **as applied to claim 13 above**, Shaver et al., as modified by Lesguillier et al., clearly show and disclose the claimed invention except that the terminals are sensors or actuators.

In the same field of endeavor, Griffin et al. clearly show and disclose an external electronic device is chosen from a sensor, an actuator and a centralized command and control device suitable for being connected to a plurality of sensors and actuators (the communication device may include a camera

component for displaying or sending video images to the communication device user, or could include sensory circuits for monitoring the communication device user's vital information such as pulse and blood pressure. A nurse or doctor in a hospital floor could wear the first component, while the second might be in a patient's room monitoring some vital statistics. The short-range communication in this example might reach several hundred feet and several second components might be communicating to a single first component. This information could then be relayed on from the first component worn by the nurse or doctor to a central nursing station for all nurses on duty to see and monitor [abstract, paragraph 57]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have multiple devices communicate with each other as taught by Griffin et al. in the communication method of Shaver et al., as modified by Lesguillier et al., in order to implement a home network using multiple protocols.

14. **Claim 17** is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of **Shaver et al. (US 6,947,736 B2)** and **Lesguillier et al. (U.S. Patent # 6,727,804 B1)** in view of **Folger et al. (U.S. Patent # 5,337,044)**, and in further view of **Kang (US 2005/0101312 A1)**.

Consider **claim 17**, Shaver et al. clearly show and disclose a central base for a private wireless local area network (home networking method and system is

based on the IEEE 802.11 wireless networking standard expanded to encompass home phone line media communication and/or home power line media communication operation seamlessly [abstract]), an electronic central unit, an electrical supply cable coupled to the electronic central unit and arranged for connection with an external electricity power source via a supply module; the electronic central unit (ECU) adapted to communicate with a public telecommunication network via a plan old telephone service (POTS) connection, the ECU also adapted to communicate with a wireless peripheral device according to a digital bidirectional wireless protocol fro a private wireless local area network (access point **250** includes three AFEs (analog front end) each adapted to communicate with a different one of the medium types; an AFE specific for each of wireless, phone line, and power line can be included the access point; one AFE can be included for wireless operating at either 2.4 GHz or 5.0 GHz, one for phone line operating in a 20 MHz band above 2 MHz over standard home phone wiring, and one for power line operating in a 20 MHz band above 2 MHz [fig. 2, col. 3 lines 45-65]); the electronic central unit (ECU) including an interface module to enable the ECU to communicate with a device via the electronic supply cable, wherein the interface module is adapted to generate a signal corresponding to a message received by the ECU for transmission to the device over the electronic supply cable and wherein the ECU is further adapted to receive a signal over the electronic supply cable corresponding to a message received from the device (the access point includes

three AFEs each adapted to communicate with a different one of the medium types discussed; the terminal devices include power line stations **212**, phone line stations **222** and wireless stations **232** in which station-to-station transmission between wireless and wired terminals are enabled via the intelligent access point [fig. 2, col. 3 lines 17-21, 62-64]), wherein the electronic central unit ECU is further adapted to receive an incoming message from the telecommunication network or the wireless peripheral, to determine whether the incoming message is intended for the device, and to generate a message corresponding to the incoming message on the electronic supply cable using the interface circuit of the central base, wherein the electronic central unit ECU is further adapted to generate a message corresponding to a high frequency periodic signal received from the device over the electronic supply cable using the interface module and to determine whether the message is intended for the public telecommunication network or the wireless peripheral device and to transmit the message over the public telecommunication network or the wireless peripheral device based on the determination (the MAC **312** is the data link sublayer that is responsible for transferring data to and from the physical layer **314** and provides the protocol and control to enable access to each of the home mediums; an AFE includes the transmitter, receiver and other typical hardware/software providing the interface between a specific medium and the physical layer for encoding/decoding and modulating/demodulating; the access point coordinates and interconnects access between any user stations connected to the same or different media within

HomeAll; such a communication link, or bridge, is enabled by the built-in address fields in the 802.11 MAC frames, and is transparent to layers above the MAC; the 802.11 MAC data frames have up to four address fields, each specifying a source address (SA), a transmitter address (TA), a receiver address (RA), and a destination address (DA); the access point can forward a data frame received from a communication link (such as on a wireless medium) to another communication link (such as on a wireline medium) based on the SA and DA values in the received frame, thereby bridging the two subnetworks comprising these two links [col. 3 lines 35-40; 49-53, col. 4 lines 30-44]).

However, Shaver et al. fail to specifically disclose that the power line uses a low-pass filter.

In the same field of endeavor, Lesguillier et al. clearly show and disclose an interface module is adapted to generate a high frequency periodic signal corresponding to a message received, wherein the ECU is further adapted to receive a high frequency periodic signal over the electronic supply cable (power line communication system includes a transmitter and a receiver, both providing a communication path between two communication control devices over a power line [abstract]; the receiver has a carrier sense function, and with this carrier sense function, when in the receiving mode, a reference signal mixes with the incoming communication signal; if the received signal on the power line is lower than the reference signal, the communication control device performs correct demodulation of the reference signal, and the received signal is seen as noise;

however, if the received signal on the power line is higher than the reference signal, demodulation errors occur at the communication control device, thereby indicating that the received signal is an actual message, [col. 2 lines 1-12]); and a low-pass filter adapted to filter said high frequency periodic signals between the interface module of the central base and at least a portion of the electronic circuits of the central base (when the transmitter (1) is active, a communication signal (2) generated by the communication control device enters the transmitter (1) through its signal input. The communication signal (2) is referred to as the "PL_TX" input signal (2) hereafter. The communication signal (2) is preferably first sent through a low-pass band filter (3) to eliminate high frequencies, [col. 3 lines 20-30]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made use a low-pass filter to block high frequencies as taught by Lesguillier et al. in the method of Shaver et al., in order to implement a home network using multiple protocols.

However, Shaver et al., as modified by Lesguillier et al., fail to specifically disclose that information (messages) sent and received are alphanumeric messages.

In the same field of endeavor, Folger et al. clearly show and disclose alphanumeric message (a system for remote control of a mobile computer system from a base computer system, where the base system generates control command tokens, which are broadcast over a pager system. The base station

might be a desktop computer, perhaps connected to a local area network. A command may be issued by the computer such as someone typing an alphanumeric message using a telephone keypad [abstract, col. 3 lines 61-67, col. 6 lines 5-11]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made send alphanumeric messages as commands from a computer or telephone as taught by Folger et al. in the communication method of Shaver et al., as modified by Lesguillier et al., in order to implement a home network using multiple protocols.

However, the combination of Shaver et al. and Lesguillier et al., as modified by Folger et al., fail to specifically disclose that information (messages) sent and received are alphanumeric messages.

In the same field of endeavor, Kang clearly shows and discloses to communicate with a home automation device (a home network system is disclosed, which includes a remote control server for controlling transmitting/receiving data at a long distance by WEB server connected to an external PC or WAP server connected to a communication terminal and by home network [abstract]; the home network system includes a communication bus for interconnecting a plurality of home appliances, such as, refrigerator, washing machine, personal computer (PC), etc..; every apparatus' micom has a serial communication function and is directly connected to the communication bus; if the micom does not have the serial communication function or uses a power line

as communication line, a separate communication module is needed to configure the home network [paragraphs 3, 4]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made control appliances that use a power line as a communication line as taught by Kang in the communication method of Shaver et al. and Lesguillier et al., as modified by Folger et al., in order to implement a home network amongst computers and a plurality of home appliances.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAIME M. HOLLIDAY whose telephone number is (571)272-8618. The examiner can normally be reached on Monday through Friday 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, V. Paul Harper can be reached on (571) 272-7605. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/VINCENT P. HARPER/
Supervisory Patent Examiner, Art Unit 2617

/Jaime M Holliday/
Examiner, Art Unit 2617